

This document gives pertinent information concerning the issuance of the VPDES Permit listed below. This permit is being processed as a **Minor, Municipal** permit. The discharge results from the operation of a 0.02 MGD wastewater treatment plant. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260-00 et seq.

1. Facility Name and Mailing Address: Clean Rapidan Water Company - Rapidan Mill WWTP
704 Locust Avenue
Charlottesville, VA 22902

SIC Code: 4952 - WWTP

Facility Location: 7026 Rapidan Road
Orange, VA 22960

County: Orange

Facility Contact Name: Michael Craun – Consulting Engineer
Telephone Number: (540) 942-5600
2. Permit Number: VA0092339
Expiration Date: N/A (Issuance)

Other VPDES Permits: N/A

Other Permits: N/A

E2/E3/E4 Status: N/A
3. Owner Name: Rapidan Mill, LLC
Owner Contact/Title: Kevin O’Brien / Development Manager
Telephone Number: (434) 979-8900
4. Application Complete Date: November 19, 2008
Permit Drafted By: Susan Mackert
Date Drafted: March 26, 2009
Draft Permit Reviewed By: Alison Thompson
Date Reviewed: April 13, 2009
Public Comment Period : Start Date: June 12, 2009
End Date: July 13, 2009
5. Receiving Waters Information: See Attachment 1 for the Flow Frequency Determination

Receiving Stream Name: Rapidan River
Drainage Area at Outfall: 445 square miles
River Mile: RAP37.93
Stream Basin: Rappahannock River
Subbasin: Rappahannock River
Section: 4
Stream Class: III
Special Standards: None
Waterbody ID: VAN-E16R
7Q10 Low Flow: 9.7 MGD
7Q10 High Flow: 54 MGD
1Q10 Low Flow: 6.5 MGD
1Q10 High Flow: 40 MGD
Harmonic Mean Flow: 98 MGD
30Q5 Flow: 26 MGD
303(d) Listed: Yes
30Q10 Flow: 16 MGD
TMDL Approved: Receiving Segment - No
Date Due: 2020
TMDL Approved: Downstream Segment - Yes
Date Approved: December 5, 2007 (bacteria)
6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

<input checked="" type="checkbox"/> State Water Control Law	<input checked="" type="checkbox"/> EPA Guidelines
<input checked="" type="checkbox"/> Clean Water Act	<input checked="" type="checkbox"/> Water Quality Standards
<input checked="" type="checkbox"/> VPDES Permit Regulation	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> EPA NPDES Regulation	
7. Licensed Operator Requirements: Class IV
8. Reliability Class: Class II

9. Permit Characterization:

<input checked="" type="checkbox"/> Private	<input checked="" type="checkbox"/> Effluent Limited	<input type="checkbox"/> Possible Interstate Effect
<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Water Quality Limited	<input type="checkbox"/> Compliance Schedule Required
<input type="checkbox"/> State	<input type="checkbox"/> Toxics Monitoring Program Required	<input type="checkbox"/> Interim Limits in Permit
<input type="checkbox"/> POTW	<input type="checkbox"/> Pretreatment Program Required	<input type="checkbox"/> Interim Limits in Other Document
<input checked="" type="checkbox"/> TMDL		

10. Wastewater Sources and Treatment Description:

This facility is not yet constructed. The proposed system will serve a mixed use industrial development with a maximum occupancy of approximately 300 people. Treatment will consist of primary settling, aerated flow equalization, membrane batch reactor or aerobic treatment units for BOD, TSS and TKN removal, UV disinfection and post aeration.

A facility schematic/diagram was provided as part of the application package and can be found within the permit issuance file.

TABLE 1 OUTFALL DESCRIPTION				
Outfall Number	Discharge Sources	Treatment	Design Flow	Outfall Latitude and Longitude
001	Domestic Wastewater	See Item 10 above	0.02 MGD	38° 18' 37" N 78° 03' 58" W
See Attachment 2 for (Rapidan, DEQ #185D) topographic map.				

11. Sludge Treatment and Disposal Methods:

It is proposed that there will be no sludge treatment at this facility. Sludge will be pumped and hauled off site by Garth Septic Service to the Town of Orange WWTP for final treatment and disposal. Grease tank solids will be pumped and hauled off site by Valley Proteins for processing.

12. Discharges, Intakes, Monitoring Stations, Other Items in Vicinity of Discharge:

The facilities and monitoring stations listed below either discharge to or are located within the following waterbody:
VAN-E16R

Permit Number/ Monitoring Station	Description
3-RAP030.21	DEQ ambient water quality monitoring station located at the Route 522
3-RAP035.10	DEQ ambient water quality monitoring station located at the Route 689 Rapidan River bridge crossing
VA0087718	DOC – Coffeewood Correctional Center
VAG406010	Robert C. Norris Residence
VAG406041	Hearth Stuartfield Residence
VAG406154	Marius V. Ianas Residence
VAG406305	John C. Price Residence
VAG406306	Gillis L. Chandler Jr. Residence
VAG406337	Lothar Briehmaier Residence
VAG406362	Luther Hardy III Residence
VAG406381	Fred M. Reid Jr. Residence
VAG406382	Donald C. Lay Residence
VAG406414	William Stanley Property

VAG406438	First Land LLC Division – Parcel 1
VAG406439	First Land LLC Division – Parcel 2
VAG406440	First Land LLC Division – Parcel 3
VAG406441	First Land LLC Division – Parcel 4
VAG406444	Helm LaDue Partnership Property
VAG406453	Christopher Koelber Property
VAG751085	Rappahannock Electric Coop – Culpeper District Office

- 13. Material Storage:** Not applicable as the facility is not yet constructed.
- 14. Site Inspection:** Performed by Susan Mackert and Alison Thompson on April 29, 2008. The site visit memorandum is located within the permit reissuance file.
- 15. Receiving Stream Water Quality and Water Quality Standards:**

a) Ambient Water Quality Data

The facility proposes to discharge into the Rapidan River at Segment VAN-E16R_RAP03A08. This segment extends from the confluence with the Robinson River, downstream until the confluence with an unnamed tributary to the Rapidan River, at rivermile 36.6. The ambient DEQ water quality monitoring station for this stretch of the Rapidan River (Station 3-RAP037.90) is located at Route 615, Rapidan Road.

The Rapidan River at segment VAN-E16R_RAP03A08 is listed as impaired on the 2008 Virginia Water Quality Assessment 305(b) / 303(d) Integrated Report for not meeting the recreational water quality use standard. Sufficient excursions from the single sample maximum *E. coli* bacteria criterion (4 of 12 samples - 33.3%) were recorded at DEQ's ambient water quality monitoring station (3-RAP037.90) at the Route 615 (Rapidan Road) crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment. A TMDL has not been prepared for this segment, but is due by 2020.

The 2008 also assessment gives an impaired classification to the following downstream segments.

▪ VAN-E16R_RAP01A04

There is a bacteria impairment for this segment which extends 4.58 rivermiles from the confluence with an unnamed tributary to the Rapidan River at approximately rivermile 34.5 and continues downstream until the confluence with Cedar Run. *E. coli* monitoring finds a bacterial impairment resulting in an impaired classification for recreation use. Sufficient excursions from the single sample maximum *E. coli* bacteria criterion (9 of 34 samples - 26.5%) were recorded at DEQ's ambient water quality monitoring station (3-RAP030.21) at the Route 522 crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment.

A TMDL has not been prepared for this segment, but is due by 2018.

▪ VAN-E18R_RAP05A08

There is a bacteria impairment for this segment which extends from the boundary of the public water supply area, approximately 1.21 rivermiles upstream from the Route 3 crossing, and continues downstream until the confluence with Lick Branch. Sufficient excursions from the single sample maximum *E. coli* bacteria criterion (3 of 13 samples - 23.1%) were recorded at DEQ's ambient water quality monitoring station (3-RAP014.45) at the Route 3 crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment.

A TMDL has not been prepared for this segment, but is due by 2020.

▪ VAN-E18R_RAP03A02

There is a bacteria impairment for this segment which extends from the confluence with Wilderness Run, at rivermile 7.78, downstream until the confluence with Middle Run. Sufficient excursions from the single sample maximum *E. coli* bacteria criterion (10 of 29 samples - 34.5%) were recorded at DEQ's ambient water quality monitoring station (3-RAP006.53) at the Route 610 crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment. The segment was previously listed for a fecal coliform bacteria impairment, from 2002 through 2004. The *E. coli* bacteria impairment was first listed in 2006.

A Total Maximum Daily Load (TMDL) for bacteria was approved for segment VAN-E18R_RAP03A02 by the U.S. EPA on December 5, 2007. The facility was not given a waste load allocation in the TMDL as it was not permitted at the time the TMDL was drafted. However, the TMDL does allow an allocation for future growth. This allocation is large enough to satisfy a permitted bacteria load for the facility.

The proposed discharge is not subject to the requirements of 9 VAC 25-820 *General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia* as the design flow is less than 0.04 MGD.

b) Receiving Stream Water Quality Criteria

Part IX of 9 VAC 25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream, Rapidan River, is located within Section 4 of the Rappahannock River Basin, and classified as Class III water.

At all times, Class III waters must achieve dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32°C, and maintain a pH of 6.0 – 9.0 standard units (S.U.).

Attachment 3 details other water quality criteria applicable to the receiving stream.

Ammonia:

The fresh water, aquatic life Water Quality Criteria for Ammonia are dependent on the instream temperature and pH. The 90th percentile temperature and pH values are used because they best represent the critical design conditions of the receiving stream. Ambient water quality data were available from DEQ's monitoring station, 3-RAP037.90, and are presented in Attachment 2.

Metals:

This is a proposed discharge, and there is no data available. Staff guidance suggests using a default hardness value of 50 mg/l CaCO₃ for streams east of the Blue Ridge. The hardness-dependent metals criteria in Attachment 3 are based on this in-stream value.

Bacteria Criteria:

The Virginia Water Quality Standards (9 VAC 25-260-170 B.) states sewage discharges shall be disinfected to achieve the following criteria:

E. coli per 100 mL of water shall not exceed the following:

	Geometric Mean ¹	Single Sample Maximum
Freshwater <i>E. coli</i> (N/100 mL)	126	235

¹For two or more samples [taken during any calendar month]

c) Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9 VAC 25-260-360, 370 and 380) designates the river basins, sections, classes and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, Rapidan River, is located within Section 4 of the Rappahannock River Basin. This section has not been designated with a special standard.

d) Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched for records to determine if there are threatened or endangered species in the vicinity of the discharge. The following threatened or endangered species were identified within a 2 mile radius of the discharge: Shenandoah Salamander, Peregrine Falcon, Upland Sandpiper, Loggerhead Shrike, Bald Eagle, Green Floater and Migrant Loggerhead Shrike. The limits proposed in this draft permit are protective of the Virginia Water Quality Standards and therefore protect the threatened and endangered species found near the discharge. The project review report is available within the permit issuance file.

16. Antidegradation (9 VAC 25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream has been classified as Tier 2 based on the best professional judgement of water planning staff. No significant degradation to the existing water quality will be allowed. In accordance with current DEQ guidance, no significant lowering of water quality is to occur where permit limits are based on the following:

- The dissolved oxygen in the receiving stream is not lowered more than 0.2 mg/L from the existing levels;
- The pH of the receiving stream is maintained within the range 6.0-9.0 S.U.;
- There is compliance with all temperature criteria applicable to the receiving stream;
- No more than 25% of the unused assimilative capacity is allocated for toxic criteria established for the protection of aquatic life; and
- No more than 10% of the unused assimilative capacity is allocated for criteria for the protection of human health.

17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development:

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points are equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLAs) are calculated. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are the calculated on the most limiting WLA, the required sampling frequency and statistical characteristics of the effluent data.

a) Effluent Screening

This is a proposed discharge, and there is no data available.

b) Mixing Zones and Wasteload Allocations (WLAs)

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [Q_e + (f)(Q_s)] - [(C_s)(f)(Q_s)]}{Q_e}$$

Where:	WLA	=	Wasteload allocation
	C _o	=	In-stream water quality criteria
	Q _e	=	Design flow
	f	=	Decimal fraction of critical flow from mixing evaluation
	Q _s	=	Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; harmonic mean for carcinogen-human health criteria; 30Q10 for ammonia criteria; and 30Q5 for non-carcinogen human health criteria)
	C _s	=	Mean background concentration of parameter in the receiving stream

The Water Quality Standards contain two distinct mixing zone requirements. The first requirement is general in nature and requires the "use of mixing zone concepts in evaluating permit limits for acute and chronic standards in 9 VAC 25-260-140.B". The second requirement is specific and establishes special restrictions for regulatory mixing zones "established by the Board".

The Department of Environmental Quality uses a simplified mixing model to estimate the amount of mixing of a discharge with the receiving stream within specified acute and chronic exposure periods. The simplified model contains the following assumptions and approximations:

- The effluent enters the stream from the bank, either via a pipe, channel or ditch.
- The effluent velocity isn't significantly greater (no more than 1 - 2 ft/sec greater) than the stream velocity.
- The receiving stream is much wider than its depth (width at least ten times the depth).
- Diffusive mixing in the longitudinal direction (lengthwise) is insignificant compared with advective transport (flow).
- Complete vertical mixing occurs instantaneously at the discharge point. This is assumed since the stream depth is much smaller than the stream width.
- Lateral mixing (across the width) is a linear function of distance downstream.
- The effluent is neutrally buoyant (e.g. the effluent discharge temperature and salinity are not significantly different from the stream's ambient temperature and salinity).
- Complete mix is determined as the point downstream where the variation in concentration is 20% or less across the width and depth of the stream.
- The velocity of passing and drifting organisms is assumed equal to the stream velocity.

If it is suitably demonstrated that a reasonable potential for lethality or chronic impacts within the physical mixing area doesn't exist, then the basic complete mix equation, with 100% of the applicable stream flow, is appropriate. If the mixing analysis determines there is a potential for lethality or chronic impacts within the physical mixing area, then the proportion of stream flow that has mixed with the effluent over the allowed exposure time is used in the basic complete mix equation. As such, the wasteload allocation equation is modified to account for the decimal fraction of critical flow (f).

Staff derived wasteload allocations where parameters are reasonably expected to be present in an effluent (e.g., total residual chlorine where chlorine is used as a means of disinfection) and where effluent data indicate the pollutant is present in the discharge above quantifiable levels. With regard to the Outfall 001 discharge, ammonia as N is likely present since this is a WWTP treating sewage. As such, Attachment 3 details the mixing analysis results and WLA derivations for these pollutants.

Antidegradation Wasteload Allocations (AWLAs):

Since the receiving stream has been determined to be Tier II water, staff must also determine antidegradation wasteload allocations (AWLAs). The steady state complete mix equation is used substituting the antidegradation baseline (C_b) for the in-stream water quality criteria (C_o):

$$AWLA = \frac{C_b (Q_e + Q_s) - (C_s) (Q_s)}{Q_e}$$

Where:

AWLA	=	Antidegradation-based wasteload allocation
C_b	=	In-stream antidegradation baseline concentration
Q_e	=	Design flow
Q_s	=	Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; harmonic mean for carcinogen-human health criteria; 30Q10 for ammonia criteria; and 30Q5 for non-carcinogen human health criteria)
C_s	=	Mean background concentration of parameter in the receiving stream.

Calculated AWLAs for the pollutants noted in 17.b. above are presented in **Attachment 3**.

c) Effluent Limitations, Outfall 001 – Toxic Pollutants

9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with (A)WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9 VAC 25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1) TKN:

A year round TKN limit of 3.0 mg/L is proposed. A TKN limit of 3.0 mg/L assumes that the remaining nitrogen is in the form of refractory organic compounds that will not be easily oxidized and that ammonia is removed when the 3.0 mg/L TKN limit is met. The weekly average limit will be 4.5 mg/L based on a multiplier of 1.5 times the monthly average.

d) Effluent Limitations and Monitoring, Outfall 001 – Conventional and Non-Conventional Pollutants

Based on the design flow rate of the proposed facility and the flow of the receiving stream, it is staff's best professional judgement that stream modeling is not necessary with this issuance. The limits proposed in this draft permit are protective of the Virginia Water Quality Standards and are set to ensure that the receiving stream D.O. does not decrease more than 0.2 mg/L to meet the requirements of the antidegradation policy.

1) Dissolved Oxygen (D.O.):

A minimum D.O. limitation of 6.0 mg/L is proposed with this issuance. This limitation is in accordance with the Water Quality Standards 9 VAC25-260-50.

2) Carbonaceous Biochemical Oxygen Demand (CBOD₅):

A monthly average CBOD₅ limitation of 10 mg/L is proposed with this issuance. This limit is based on best professional judgement and Guidance Memo 00-2011 which recommends effluent limitations should be of such quality to essentially be self-sustaining. The weekly average limit will be 15 mg/L based on a multiplier of 1.5 times the monthly average.

3) Total Suspended Solids (TSS):

It is staff's practice to equate the Total Suspended Solids limits with the BOD₅ limit since the two pollutants are closely related in terms of treatment of domestic sewage. Therefore, a monthly average TSS limitation of 10 mg/L is proposed with this issuance. The weekly average limit will be 15 mg/L based on a multiplier of 1.5 times the monthly average.

4) pH:

pH limitations are set at the water quality criteria.

5) *E. coli*:

E. coli limitations are in accordance with the Water Quality Standards 9 VAC25-260-170.

e) Effluent Limitations and Monitoring Summary

The effluent limitations are presented in the following table. Limits were established for CBOD₅, Total Suspended Solids, TKN, pH, Dissolved Oxygen, and *E. coli*.

The limit for Total Suspended Solids is based on Best Professional Judgement.

The mass loading (kg/d), for monthly and weekly averages, were calculated by multiplying the concentration values (mg/L), with the flow values (in MGD) and a conversion factor of 3.785.

The mass loading (lb/d), for TKN/Total Phosphorus monthly and weekly averages were calculated by multiplying the concentration values (mg/L), with the flow values (in MGD) and a conversion factor of 8.3438.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit Manual.

The VPDES Permit Regulation at 9 VAC 25-31-30 and 40 CFR Part 133 require that the facility achieve at least 85% removal for BOD/CBOD and TSS (or 65% for equivalent to secondary). The limits in this permit are water-quality-based effluent limits and result in greater than 85% removal.

18. Antibalancing:

Balancing is not applicable as this is a permit issuance.

19. Effluent Limitations/Monitoring Requirements: Outfall 001

Design flow is 0.02 MGD.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
		Monthly Average		Weekly Average		Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL		N/A		N/A	NL	1/D	Estimate
pH	3	N/A		N/A		6.0 S.U.	9.0 S.U.	1/D	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD ₅)	2,3	10 mg/L	0.76 kg/day	15 mg/L	1.1 kg/day	N/A	N/A	1/M	Grab
Total Suspended Solids (TSS)	2	10 mg/L	0.76 kg/day	15 mg/L	1.1 kg/day	N/A	N/A	1/M	Grab
Dissolved Oxygen (DO)	3	N/A		N/A		6.0 mg/L	N/A	1/D	Grab
Total Kjeldahl Nitrogen (TKN)	2,3	3.0 mg/L	0.50 lb/day	4.5 mg/L	0.75 lb/day	N/A	N/A	1/M	Grab
<i>E. coli</i> (Geometric Mean)	3	126 n/100mL		N/A		N/A	N/A	2/M	Grab

The basis for the limitations codes are:

- | | | |
|----------------------------------|---|--|
| 1. Federal Effluent Requirements | <i>MGD</i> = Million gallons per day. | <i>1/D</i> = Once per day. |
| 2. Best Professional Judgement | <i>N/A</i> = Not applicable. | <i>1/M</i> = Once per month. |
| 3. Water Quality Standards | <i>NL</i> = No limit; monitor and report. | <i>2/M</i> = Twice per month, greater than 7 days
apart between 10am and 4pm. |
| | <i>S.U.</i> = Standard units. | |

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

20. Other Permit Requirements:

- a) Part I.B. of the permit contains quantification levels and compliance reporting instructions.

9 VAC 25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

21. Other Special Conditions:

- a) 95% Capacity Reopener. The VPDES Permit Regulation at 9 VAC 25-31-200.B.2. requires all POTWs and PVOTWs develop and submit a plan of action to DEQ when the monthly average influent flow to their sewage treatment plant reaches 95% or more of the design capacity authorized in the permit for each month of any three consecutive month period. This facility is a PVOTW.
- b) Indirect Dischargers. Required by VPDES Permit Regulation, 9 VAC 25-31-280 B.9 for POTWs and PVOTWs that receive waste from someone other than the owner of the treatment works.
- c) O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790; VPDES Permit Regulation, 9 VAC 25-31-190.E. Within 90 days of receiving a Certificate to Operate (CTO) from the Department of Environmental Quality, the permittee shall submit for approval an Operations and Maintenance (O&M) Manual to the Department of Environmental Quality, Northern Regional Office (DEQ-NRO). Future changes to the facility must be addressed by the submittal of a revised O&M Manual within 90 days of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.
- d) CTC, CTO Requirement. The Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790 requires that all treatment works treating wastewater obtain a Certificate to Construct prior to commencing construction and to obtain a Certificate to Operate prior to commencing operation of the treatment works.
- e) Licensed Operator Requirement. The Code of Virginia at §54.1-2300 et seq. and the VPDES Permit Regulation at 9 VAC 25-31-200 C, and Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.) requires licensure of operators. This facility requires a Class IV operator.
- f) Reliability Class. The Sewage Collection and Treatment Regulation at 9 VAC 25-790 requires sewerage works achieve a certain level of reliability in order to protect water quality and public health consequences in the event of component or system failure. The facility is required to meet reliability Class II.
- g) Water Quality Criteria Reopener. The VPDES Permit Regulation at 9 VAC 25-31-220 D. requires establishment of effluent limitations to ensure attainment/maintenance of receiving stream water quality criteria. Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.
- h) Sludge Reopener. The VPDES Permit Regulation at 9 VAC 25-31-200.C.4. requires all permits issued to treatment works treating domestic sewage (including sludge-only facilities) include a reopener clause allowing incorporation of any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the CWA. The facility includes a sewage treatment works.
- i) Sludge Use and Disposal. The VPDES Permit Regulation at 9 VAC 25-31-100.P., 220.B.2., and 420-720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on their sludge use and disposal practices and to meet specified standards for sludge use and disposal. The facility includes a treatment works treating domestic sewage.
- j) Treatment Works Closure Plan. The State Water Control Law §62.1-44.15:1.1, makes it illegal for an owner to cease operation and fail to implement a closure plan when failure to implement the plan would result in harm to human health or the environment. This condition is used to notify the owner of the need for a closure plan where a facility is being replaced or is expected to close.

22. Permit Section Part II. Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

23. **Changes to the Permit from the Previously Issued Permit:**

- a) Special Conditions: Not applicable as this is a permit issuance.
- b) Monitoring and Effluent Limitations: Not applicable as this is a permit issuance.

24. **Variances/Alternate Limits or Conditions:** N/A

25. **Public Notice Information:**

First Public Notice Date: June 11, 2009

Second Public Notice Date: June 18, 2009

Public Notice Information is required by 9 VAC 25-31-280 B. All pertinent information is on file and may be inspected and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193, Telephone No. (703) 583-3853, susan.mackert@deq.virginia.gov. See Attachment 4 for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

26. **303 (d) Listed Stream Segments and Total Max. Daily Loads (TMDL):**

The Rapidan River at segment VAN-E16R_RAP03A08 is listed as impaired on the 2008 Virginia Water Quality Assessment 305(b) / 303(d) Integrated Report for not meeting the recreational water quality use standard. Sufficient excursions from the single sample maximum *E. coli* bacteria criterion (4 of 12 samples - 33.3%) were recorded at DEQ's ambient water quality monitoring station (3-RAP037.90) at the Route 615 (Rapidan Road) crossing to assess this stream segment as not supporting of the recreation use goal for the 2008 water quality assessment.

A Total Maximum Daily Load (TMDL) for bacteria was approved for a downstream segment (VAN-E18R_RAP03A02) by the U.S. EPA on December 5, 2007. The facility was not given a waste load allocation in the TMDL as it was not permitted at the time the TMDL was drafted. However, the TMDL does allow an allocation for future growth. This allocation is large enough to satisfy a permitted bacteria load for the facility. Based on the recommendation of TMDL staff, the facility will receive a WLA of 3.48E+10 cfu/year of *E. coli*.

TMDL Reopener: This special condition is to allow the permit to be reopened if necessary to bring it into compliance with any applicable TMDL that may be developed and approved for the receiving stream.

27. **Additional Comments:**

Previous Board Action(s): Not applicable as this is a permit issuance.

Staff Comments: Permit processing was delayed due to the original application being deemed incomplete due to an inconsistent local government ordinance form.

Public Comment: No comments were received during the public notice.

EPA Checklist: The checklist can be found in Attachment 5.

Fact Sheet Attachments – Table of Contents

Rapidan Mill Wastewater Treatment Plant VA0092339 2009 Issuance

Attachment 1	Flow Frequency Determination
Attachment 2	Topographic Map
Attachment 3	Wasteload Allocation Analysis
Attachment 4	Public Notice
Attachment 5	EPA Checklist

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE

13901 Crown Court

Woodbridge, VA 22193

SUBJECT: Flow Frequency Determination
Rapidan Mill WWTP (VA0092339)

TO: Permit Issuance File

FROM: Susan Mackert

DATE: March 25, 2009

The proposed discharge from the Rapidan Mill WWTP is to the Rapidan River near Rapidan, Virginia. Stream flow frequencies are required at this site for use in developing effluent limitations for the VPDES permit.

The USGS has operated a continuous record gage on the Rapidan River near Culpeper, Virginia (#01667500) since 1930. The gage is approximately 5.66 miles downstream of the discharge point. The flow frequencies for the gage are presented below. The values at the discharge point were determined by drainage area proportions and do not address any withdrawals, discharges or springs lying between the gage and the outfall.

Rapidan River near Culpeper, VA (#01667500):

Drainage Area = 472 mi²

1Q10 = 11 cfs	High Flow 1Q10 = 66 cfs
7Q10 = 16 cfs	High Flow 7Q10 = 89 cfs
30Q10 = 27 cfs	High Flow 30Q10 = 119 cfs
30Q5 = 44 cfs	Harmonic Mean = 161 cfs

Rapidan River at discharge point:

Drainage Area = 445 mi²

1Q10 = 10 cfs (6.5 MGD)*	High Flow 1Q10 = 62 cfs (40 MGD)*
7Q10 = 15 cfs (9.7 MGD)*	High Flow 7Q10 = 84 cfs (54 MGD)*
30Q10 = 25 cfs (16 MGD)*	High Flow 30Q10 = 112 cfs (72 MGD)*
30Q5 = 41 cfs (26 MGD)*	Harmonic Mean = 152 cfs (98 MGD)*

*Conversion to MGD = (cfs flow measurement) x (0.6463)

The high flow months are December through May.

FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Rapidan Mill WWTP

Permit No.: VA0092339

Receiving Stream: Rapidan River

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO3) =	mg/L
90% Temperature (Annual) =	27 deg C
90% Temperature (Wet season) =	deg C
90% Maximum pH =	9.7 SU
10% Maximum pH =	SU
Tier Designation (1 or 2) =	2
Public Water Supply (PWS) Y/N? =	n
Trout Present Y/N? =	n
Early Life Stages Present Y/N? =	y

Stream Flows

1Q10 (Annual) =	6.5 MGD
7Q10 (Annual) =	9.7 MGD
30Q10 (Annual) =	16 MGD
1Q10 (Wet season) =	40 MGD
30Q10 (Wet season) =	72 MGD
30Q5 =	26 MGD
Harmonic Mean =	98 MGD
Annual Average =	0 MGD

Mixing Information

Annual - 1Q10 Mix =	5 %
- 7Q10 Mix =	100 %
- 30Q10 Mix =	100 %
Wet Season - 1Q10 Mix =	25.88 %
- 30Q10 Mix =	100 %

Effluent Information

Mean Hardness (as CaCO3) =	50 mg/L
90% Temp (Annual) =	25 deg C
90% Temp (Wet season) =	deg C
90% Maximum pH =	8 SU
10% Maximum pH =	SU
Discharge Flow =	0.02 MGD

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenaphthene	0	--	--	na	2.7E+03	--	--	na	3.5E+06	--	--	na	2.7E+02	--	--	na	3.5E+05	--	--	na	3.5E+05
Acrolein	0	--	--	na	7.8E+02	--	--	na	1.0E+06	--	--	na	7.8E+01	--	--	na	1.0E+05	--	--	na	1.0E+05
Acrylonitrile ^c	0	--	--	na	6.6E+00	--	--	na	3.2E+04	--	--	na	6.6E-01	--	--	na	3.2E+03	--	--	na	3.2E+03
Aldrin ^c	0	3.0E+00	--	na	1.4E-03	5.2E+01	--	na	6.9E+00	7.5E-01	--	na	1.4E-04	2.4E+02	--	na	6.9E-01	5.2E+01	--	na	6.9E-01
Ammonia-N (mg/l) (Yearly)	0	1.32E+00	2.18E-01	na	--	2.3E+01	1.7E+02	na	--	3.31E-01	5.44E-02	na	--	1.1E+02	4.4E+01	na	--	2.3E+01	4.4E+01	na	--
Ammonia-N (mg/l) (High Flow)	0	1.32E+00	4.86E-01	na	--	6.9E+02	1.8E+03	na	--	3.31E-01	1.22E-01	na	--	6.6E+02	4.4E+02	na	--	6.6E+02	4.4E+02	na	--
Anthracene	0	--	--	na	1.1E+05	--	--	na	1.4E+08	--	--	na	1.1E+04	--	--	na	1.4E+07	--	--	na	1.4E+07
Antimony	0	--	--	na	4.3E+03	--	--	na	5.6E+06	--	--	na	4.3E+02	--	--	na	5.6E+05	--	--	na	5.6E+05
Arsenic	0	3.4E+02	1.5E+02	na	--	5.9E+03	7.3E+04	na	--	8.5E+01	3.8E+01	na	--	2.8E+04	1.8E+04	na	--	5.9E+03	1.8E+04	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Benzene ^c	0	--	--	na	7.1E+02	--	--	na	3.5E+06	--	--	na	7.1E+01	--	--	na	3.5E+05	--	--	na	3.5E+05
Benzidine ^c	0	--	--	na	5.4E-03	--	--	na	2.6E+01	--	--	na	5.4E-04	--	--	na	2.6E+00	--	--	na	2.6E+00
Benzo (a) anthracene ^c	0	--	--	na	4.9E-01	--	--	na	2.4E+03	--	--	na	4.9E-02	--	--	na	2.4E+02	--	--	na	2.4E+02
Benzo (b) fluoranthene ^c	0	--	--	na	4.9E-01	--	--	na	2.4E+03	--	--	na	4.9E-02	--	--	na	2.4E+02	--	--	na	2.4E+02
Benzo (k) fluoranthene ^c	0	--	--	na	4.9E-01	--	--	na	2.4E+03	--	--	na	4.9E-02	--	--	na	2.4E+02	--	--	na	2.4E+02
Benzo (a) pyrene ^c	0	--	--	na	4.9E-01	--	--	na	2.4E+03	--	--	na	4.9E-02	--	--	na	2.4E+02	--	--	na	2.4E+02
Bis(2-Chloroethyl) Ether	0	--	--	na	1.4E+01	--	--	na	1.8E+04	--	--	na	1.4E+00	--	--	na	1.8E+03	--	--	na	1.8E+03
Bis(2-Chloroisopropyl) Ether	0	--	--	na	1.7E+05	--	--	na	2.2E+08	--	--	na	1.7E+04	--	--	na	2.2E+07	--	--	na	2.2E+07
Bromoform ^c	0	--	--	na	3.6E+03	--	--	na	1.8E+07	--	--	na	3.6E+02	--	--	na	1.8E+06	--	--	na	1.8E+06
Butylbenzylphthalate	0	--	--	na	5.2E+03	--	--	na	6.8E+06	--	--	na	5.2E+02	--	--	na	6.8E+05	--	--	na	6.8E+05
Cadmium	0	8.2E-01	3.8E-01	na	--	1.4E+01	1.9E+02	na	--	2.1E-01	9.5E-02	na	--	6.7E+01	4.6E+01	na	--	1.4E+01	4.6E+01	na	--
Carbon Tetrachloride ^c	0	--	--	na	4.4E+01	--	--	na	2.2E+05	--	--	na	4.4E+00	--	--	na	2.2E+04	--	--	na	2.2E+04
Chlordane ^c	0	2.4E+00	4.3E-03	na	2.2E-02	4.1E+01	2.1E+00	na	1.1E+02	6.0E-01	1.1E-03	na	2.2E-03	2.0E+02	5.2E-01	na	1.1E+01	4.1E+01	5.2E-01	na	1.1E+01
Chloride	0	8.6E+05	2.3E+05	na	--	1.5E+07	1.1E+08	na	--	2.2E+05	5.8E+04	na	--	7.0E+07	2.8E+07	na	--	1.5E+07	2.8E+07	na	--
TRC	0	1.9E+01	1.1E+01	na	--	3.3E+02	5.3E+03	na	--	4.8E+00	2.8E+00	na	--	1.5E+03	1.3E+03	na	--	3.3E+02	1.3E+03	na	--
Chlorobenzene	0	--	--	na	2.1E+04	--	--	na	2.7E+07	--	--	na	2.1E+03	--	--	na	2.7E+06	--	--	na	2.7E+06

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane ^C	0	--	--	na	3.4E+02	--	--	na	1.7E+06	--	--	na	3.4E+01	--	--	na	1.7E+05	--	--	na	1.7E+05
Chloroform ^C	0	--	--	na	2.9E+04	--	--	na	1.4E+08	--	--	na	2.9E+03	--	--	na	1.4E+07	--	--	na	1.4E+07
2-Chloronaphthalene	0	--	--	na	4.3E+03	--	--	na	5.6E+06	--	--	na	4.3E+02	--	--	na	5.6E+05	--	--	na	5.6E+05
2-Chlorophenol	0	--	--	na	4.0E+02	--	--	na	5.2E+05	--	--	na	4.0E+01	--	--	na	5.2E+04	--	--	na	5.2E+04
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	1.4E+00	2.0E+01	na	--	2.1E-02	1.0E-02	na	--	6.8E+00	5.0E+00	na	--	1.4E+00	5.0E+00	na	--
Chromium III	0	1.8E+02	2.4E+01	na	--	3.2E+03	1.2E+04	na	--	4.6E+01	6.0E+00	na	--	1.5E+04	2.9E+03	na	--	3.2E+03	2.9E+03	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	2.8E+02	5.3E+03	na	--	4.0E+00	2.8E+00	na	--	1.3E+03	1.3E+03	na	--	2.8E+02	1.3E+03	na	--
Chromium, Total	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Chrysene ^C	0	--	--	na	4.9E-01	--	--	na	2.4E+03	--	--	na	4.9E-02	--	--	na	2.4E+02	--	--	na	2.4E+02
Copper	0	3.6E+00	2.7E+00	na	--	6.3E+01	1.3E+03	na	--	9.1E-01	6.8E-01	na	--	3.0E+02	3.3E+02	na	--	6.3E+01	3.3E+02	na	--
Cyanide	0	2.2E+01	5.2E+00	na	2.2E+05	3.8E+02	2.5E+03	na	2.8E+08	5.5E+00	1.3E+00	na	2.2E+04	1.8E+03	6.3E+02	na	2.8E+07	3.8E+02	6.3E+02	na	2.8E+07
DDD ^C	0	--	--	na	8.4E-03	--	--	na	4.1E+01	--	--	na	8.4E-04	--	--	na	4.1E+00	--	--	na	4.1E+00
DDE ^C	0	--	--	na	5.9E-03	--	--	na	2.9E+01	--	--	na	5.9E-04	--	--	na	2.9E+00	--	--	na	2.9E+00
DDT ^C	0	1.1E+00	1.0E-03	na	5.9E-03	1.9E+01	4.9E-01	na	2.9E+01	2.8E-01	2.5E-04	na	5.9E-04	9.0E+01	1.2E-01	na	2.9E+00	1.9E+01	1.2E-01	na	2.9E+00
Demeton	0	--	1.0E-01	na	--	--	4.9E+01	na	--	--	2.5E-02	na	--	--	1.2E+01	na	--	--	1.2E+01	na	--
Dibenz(a,h)anthracene ^C	0	--	--	na	4.9E-01	--	--	na	2.4E+03	--	--	na	4.9E-02	--	--	na	2.4E+02	--	--	na	2.4E+02
Dibutyl phthalate	0	--	--	na	1.2E+04	--	--	na	1.6E+07	--	--	na	1.2E+03	--	--	na	1.6E+06	--	--	na	1.6E+06
Dichloromethane (Methylene Chloride) ^C	0	--	--	na	1.6E+04	--	--	na	7.8E+07	--	--	na	1.6E+03	--	--	na	7.8E+06	--	--	na	7.8E+06
1,2-Dichlorobenzene	0	--	--	na	1.7E+04	--	--	na	2.2E+07	--	--	na	1.7E+03	--	--	na	2.2E+06	--	--	na	2.2E+06
1,3-Dichlorobenzene	0	--	--	na	2.6E+03	--	--	na	3.4E+06	--	--	na	2.6E+02	--	--	na	3.4E+05	--	--	na	3.4E+05
1,4-Dichlorobenzene	0	--	--	na	2.6E+03	--	--	na	3.4E+06	--	--	na	2.6E+02	--	--	na	3.4E+05	--	--	na	3.4E+05
3,3-Dichlorobenzidine ^C	0	--	--	na	7.7E-01	--	--	na	3.8E+03	--	--	na	7.7E-02	--	--	na	3.8E+02	--	--	na	3.8E+02
Dichlorobromomethane ^C	0	--	--	na	4.6E+02	--	--	na	2.3E+06	--	--	na	4.6E+01	--	--	na	2.3E+05	--	--	na	2.3E+05
1,2-Dichloroethane ^C	0	--	--	na	9.9E+02	--	--	na	4.9E+06	--	--	na	9.9E+01	--	--	na	4.9E+05	--	--	na	4.9E+05
1,1-Dichloroethylene	0	--	--	na	1.7E+04	--	--	na	2.2E+07	--	--	na	1.7E+03	--	--	na	2.2E+06	--	--	na	2.2E+06
1,2-trans-dichloroethylene	0	--	--	na	1.4E+05	--	--	na	1.8E+08	--	--	na	1.4E+04	--	--	na	1.8E+07	--	--	na	1.8E+07
2,4-Dichlorophenol	0	--	--	na	7.9E+02	--	--	na	1.0E+06	--	--	na	7.9E+01	--	--	na	1.0E+05	--	--	na	1.0E+05
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
1,2-Dichloropropane ^C	0	--	--	na	3.9E+02	--	--	na	1.9E+06	--	--	na	3.9E+01	--	--	na	1.9E+05	--	--	na	1.9E+05
1,3-Dichloropropene	0	--	--	na	1.7E+03	--	--	na	2.2E+06	--	--	na	1.7E+02	--	--	na	2.2E+05	--	--	na	2.2E+05
Dieldrin ^C	0	2.4E-01	5.6E-02	na	1.4E-03	4.1E+00	2.7E+01	na	6.9E+00	6.0E-02	1.4E-02	na	1.4E-04	2.0E+01	6.8E+00	na	6.9E-01	4.1E+00	6.8E+00	na	6.9E-01
Diethyl Phthalate	0	--	--	na	1.2E+05	--	--	na	1.6E+08	--	--	na	1.2E+04	--	--	na	1.6E+07	--	--	na	1.6E+07
Di-2-Ethylhexyl Phthalate ^C	0	--	--	na	5.9E+01	--	--	na	2.9E+05	--	--	na	5.9E+00	--	--	na	2.9E+04	--	--	na	2.9E+04
2,4-Dimethylphenol	0	--	--	na	2.3E+03	--	--	na	3.0E+06	--	--	na	2.3E+02	--	--	na	3.0E+05	--	--	na	3.0E+05
Dimethyl Phthalate	0	--	--	na	2.9E+06	--	--	na	3.8E+09	--	--	na	2.9E+05	--	--	na	3.8E+08	--	--	na	3.8E+08
Di-n-Butyl Phthalate	0	--	--	na	1.2E+04	--	--	na	1.6E+07	--	--	na	1.2E+03	--	--	na	1.6E+06	--	--	na	1.6E+06
2,4 Dinitrophenol	0	--	--	na	1.4E+04	--	--	na	1.8E+07	--	--	na	1.4E+03	--	--	na	1.8E+06	--	--	na	1.8E+06
2-Methyl-4,6-Dinitrophenol	0	--	--	na	7.65E+02	--	--	na	1.0E+06	--	--	na	7.7E+01	--	--	na	1.0E+05	--	--	na	1.0E+05
2,4-Dinitrotoluene ^C	0	--	--	na	9.1E+01	--	--	na	4.5E+05	--	--	na	9.1E+00	--	--	na	4.5E+04	--	--	na	4.5E+04
Dioxin (2,3,7,8- tetrachlorodibenzo-p-dioxin) (ppq)	0	--	--	na	1.2E-06	--	--	na	na	--	--	na	1.2E-07	--	--	na	1.2E-07	--	--	na	na
1,2-Diphenylhydrazine ^C	0	--	--	na	5.4E+00	--	--	na	2.6E+04	--	--	na	5.4E-01	--	--	na	2.6E+03	--	--	na	2.6E+03
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	2.4E+02	3.8E+00	2.7E+01	na	3.1E+05	5.5E-02	1.4E-02	na	2.4E+01	1.8E+01	6.8E+00	na	3.1E+04	3.8E+00	6.8E+00	na	3.1E+04
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	2.4E+02	3.8E+00	2.7E+01	na	3.1E+05	5.5E-02	1.4E-02	na	2.4E+01	1.8E+01	6.8E+00	na	3.1E+04	3.8E+00	6.8E+00	na	3.1E+04
Endosulfan Sulfate	0	--	--	na	2.4E+02	--	--	na	3.1E+05	--	--	na	2.4E+01	--	--	na	3.1E+04	--	--	na	3.1E+04
Endrin	0	8.6E-02	3.6E-02	na	8.1E-01	1.5E+00	1.7E+01	na	1.1E+03	2.2E-02	9.0E-03	na	8.1E-02	7.0E+00	4.4E+00	na	1.1E+02	1.5E+00	4.4E+00	na	1.1E+02
Endrin Aldehyde	0	--	--	na	8.1E-01	--	--	na	1.1E+03	--	--	na	8.1E-02	--	--	na	1.1E+02	--	--	na	1.1E+02

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.9E+04	--	--	na	3.8E+07	--	--	na	2.9E+03	--	--	na	3.8E+06	--	--	na	3.8E+06
Fluoranthene	0	--	--	na	3.7E+02	--	--	na	4.8E+05	--	--	na	3.7E+01	--	--	na	4.8E+04	--	--	na	4.8E+04
Fluorene	0	--	--	na	1.4E+04	--	--	na	1.8E+07	--	--	na	1.4E+03	--	--	na	1.8E+06	--	--	na	1.8E+06
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	4.9E+00	na	--	--	2.5E-03	na	--	--	1.2E+00	na	--	--	1.2E+00	na	--
Heptachlor ^C	0	5.2E-01	3.8E-03	na	2.1E-03	9.0E+00	1.8E+00	na	1.0E+01	1.3E-01	9.5E-04	na	2.1E-04	4.2E+01	4.6E-01	na	1.0E+00	9.0E+00	4.6E-01	na	1.0E+00
Heptachlor Epoxide ^C	0	5.2E-01	3.8E-03	na	1.1E-03	9.0E+00	1.8E+00	na	5.4E+00	1.3E-01	9.5E-04	na	1.1E-04	4.2E+01	4.6E-01	na	5.4E-01	9.0E+00	4.6E-01	na	5.4E-01
Hexachlorobenzene ^C	0	--	--	na	7.7E-03	--	--	na	3.8E+01	--	--	na	7.7E-04	--	--	na	3.8E+00	--	--	na	3.8E+00
Hexachlorobutadiene ^C	0	--	--	na	5.0E+02	--	--	na	2.5E+06	--	--	na	5.0E+01	--	--	na	2.5E+05	--	--	na	2.5E+05
Hexachlorocyclohexane																					
Alpha-BHC ^C	0	--	--	na	1.3E-01	--	--	na	6.4E+02	--	--	na	1.3E-02	--	--	na	6.4E+01	--	--	na	6.4E+01
Hexachlorocyclohexane																					
Beta-BHC ^C	0	--	--	na	4.6E-01	--	--	na	2.3E+03	--	--	na	4.6E-02	--	--	na	2.3E+02	--	--	na	2.3E+02
Hexachlorocyclohexane																					
Gamma-BHC ^C (Lindane)	0	9.5E-01	na	na	6.3E-01	1.6E+01	--	na	3.1E+03	2.4E-01	--	na	6.3E-02	7.7E+01	--	na	3.1E+02	1.6E+01	--	na	3.1E+02
Hexachlorocyclopentadiene	0	--	--	na	1.7E+04	--	--	na	2.2E+07	--	--	na	1.7E+03	--	--	na	2.2E+06	--	--	na	2.2E+06
Hexachloroethane ^C	0	--	--	na	8.9E+01	--	--	na	4.4E+05	--	--	na	8.9E+00	--	--	na	4.4E+04	--	--	na	4.4E+04
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	9.7E+02	na	--	--	5.0E-01	na	--	--	2.4E+02	na	--	--	2.4E+02	na	--
Indeno (1,2,3-cd) pyrene ^C	0	--	--	na	4.9E-01	--	--	na	2.4E+03	--	--	na	4.9E-02	--	--	na	2.4E+02	--	--	na	2.4E+02
Iron	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Isophorone ^C	0	--	--	na	2.6E+04	--	--	na	1.3E+08	--	--	na	2.6E+03	--	--	na	1.3E+07	--	--	na	1.3E+07
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--
Lead	0	2.0E+01	2.3E+00	na	--	3.5E+02	1.1E+03	na	--	5.1E+00	5.8E-01	na	--	1.7E+03	2.8E+02	na	--	3.5E+02	2.8E+02	na	--
Malathion	0	--	1.0E-01	na	--	--	4.9E+01	na	--	--	2.5E-02	na	--	--	1.2E+01	na	--	--	1.2E+01	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	na	5.1E-02	2.4E+01	3.7E+02	na	6.6E+01	3.5E-01	1.9E-01	na	5.1E-03	1.1E+02	9.4E+01	na	6.6E+00	2.4E+01	9.4E+01	na	6.6E+00
Methyl Bromide	0	--	--	na	4.0E+03	--	--	na	5.2E+06	--	--	na	4.0E+02	--	--	na	5.2E+05	--	--	na	5.2E+05
Methoxychlor	0	--	3.0E-02	na	--	--	1.5E+01	na	--	--	7.5E-03	na	--	--	3.6E+00	na	--	--	3.6E+00	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--	--	0.0E+00	na	--
Monochlorobenzene	0	--	--	na	2.1E+04	--	--	na	2.7E+07	--	--	na	2.1E+03	--	--	na	2.7E+06	--	--	na	2.7E+06
Nickel	0	5.6E+01	6.3E+00	na	4.6E+03	9.7E+02	3.0E+03	na	6.0E+06	1.4E+01	1.6E+00	na	4.6E+02	4.6E+03	7.6E+02	na	6.0E+05	9.7E+02	7.6E+02	na	6.0E+05
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Nitrobenzene	0	--	--	na	1.9E+03	--	--	na	2.5E+06	--	--	na	1.9E+02	--	--	na	2.5E+05	--	--	na	2.5E+05
N-Nitrosodimethylamine ^C	0	--	--	na	8.1E+01	--	--	na	4.0E+05	--	--	na	8.1E+00	--	--	na	4.0E+04	--	--	na	4.0E+04
N-Nitrosodiphenylamine ^C	0	--	--	na	1.6E+02	--	--	na	7.8E+05	--	--	na	1.6E+01	--	--	na	7.8E+04	--	--	na	7.8E+04
N-Nitrosodi-n-propylamine ^C	0	--	--	na	1.4E+01	--	--	na	6.9E+04	--	--	na	1.4E+00	--	--	na	6.9E+03	--	--	na	6.9E+03
Parathion	0	6.5E-02	1.3E-02	na	--	1.1E+00	6.3E+00	na	--	1.6E-02	3.3E-03	na	--	5.3E+00	1.6E+00	na	--	1.1E+00	1.6E+00	na	--
PCB-1016	0	--	1.4E-02	na	--	--	6.8E+00	na	--	--	3.5E-03	na	--	--	1.7E+00	na	--	--	1.7E+00	na	--
PCB-1221	0	--	1.4E-02	na	--	--	6.8E+00	na	--	--	3.5E-03	na	--	--	1.7E+00	na	--	--	1.7E+00	na	--
PCB-1232	0	--	1.4E-02	na	--	--	6.8E+00	na	--	--	3.5E-03	na	--	--	1.7E+00	na	--	--	1.7E+00	na	--
PCB-1242	0	--	1.4E-02	na	--	--	6.8E+00	na	--	--	3.5E-03	na	--	--	1.7E+00	na	--	--	1.7E+00	na	--
PCB-1248	0	--	1.4E-02	na	--	--	6.8E+00	na	--	--	3.5E-03	na	--	--	1.7E+00	na	--	--	1.7E+00	na	--
PCB-1254	0	--	1.4E-02	na	--	--	6.8E+00	na	--	--	3.5E-03	na	--	--	1.7E+00	na	--	--	1.7E+00	na	--
PCB-1260	0	--	1.4E-02	na	--	--	6.8E+00	na	--	--	3.5E-03	na	--	--	1.7E+00	na	--	--	1.7E+00	na	--
PCB Total ^C	0	--	--	na	1.7E-03	--	--	na	8.3E+00	--	--	na	1.7E-04	--	--	na	8.3E-01	--	--	na	8.3E-01

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Pentachlorophenol ^C	0	7.7E-03	5.9E-03	na	8.2E+01	1.3E-01	2.9E+00	na	4.0E+05	1.9E-03	1.5E-03	na	8.2E+00	6.3E-01	7.2E-01	na	4.0E+04	1.3E-01	7.2E-01	na	4.0E+04
Phenol	0	--	--	na	4.6E+06	--	--	na	6.0E+09	--	--	na	4.6E+05	--	--	na	6.0E+08	--	--	na	6.0E+08
Pyrene	0	--	--	na	1.1E+04	--	--	na	1.4E+07	--	--	na	1.1E+03	--	--	na	1.4E+06	--	--	na	1.4E+06
Radionuclides (pCi/l except Beta/Photon)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Gross Alpha Activity	0	--	--	na	1.5E+01	--	--	na	2.0E+04	--	--	na	1.5E+00	--	--	na	2.0E+03	--	--	na	2.0E+03
Beta and Photon Activity (mrem/yr)	0	--	--	na	4.0E+00	--	--	na	5.2E+03	--	--	na	4.0E-01	--	--	na	5.2E+02	--	--	na	5.2E+02
Strontium-90	0	--	--	na	8.0E+00	--	--	na	1.0E+04	--	--	na	8.0E-01	--	--	na	1.0E+03	--	--	na	1.0E+03
Tritium	0	--	--	na	2.0E+04	--	--	na	2.6E+07	--	--	na	2.0E+03	--	--	na	2.6E+06	--	--	na	2.6E+06
Selenium	0	2.0E+01	5.0E+00	na	1.1E+04	3.5E+02	2.4E+03	na	1.4E+07	5.0E+00	1.3E+00	na	1.1E+03	1.6E+03	6.1E+02	na	1.4E+06	3.5E+02	6.1E+02	na	1.4E+06
Silver	0	3.2E-01	--	na	--	5.5E+00	--	na	--	7.9E-02	--	na	--	2.6E+01	--	na	--	5.5E+00	--	na	--
Sulfate	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
1,1,2,2-Tetrachloroethane ^C	0	--	--	na	1.1E+02	--	--	na	5.4E+05	--	--	na	1.1E+01	--	--	na	5.4E+04	--	--	na	5.4E+04
Tetrachloroethylene ^C	0	--	--	na	8.9E+01	--	--	na	4.4E+05	--	--	na	8.9E+00	--	--	na	4.4E+04	--	--	na	4.4E+04
Thallium	0	--	--	na	6.3E+00	--	--	na	8.2E+03	--	--	na	6.3E-01	--	--	na	8.2E+02	--	--	na	8.2E+02
Toluene	0	--	--	na	2.0E+05	--	--	na	2.6E+08	--	--	na	2.0E+04	--	--	na	2.6E+07	--	--	na	2.6E+07
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Toxaphene ^C	0	7.3E-01	2.0E-04	na	7.5E-03	1.3E+01	9.7E-02	na	3.7E+01	1.8E-01	5.0E-05	na	7.5E-04	5.9E+01	2.4E-02	na	3.7E+00	1.3E+01	2.4E-02	na	3.7E+00
Tributyltin	0	4.6E-01	6.3E-02	na	--	7.9E+00	3.1E+01	na	--	1.2E-01	1.6E-02	na	--	3.7E+01	7.7E+00	na	--	7.9E+00	7.7E+00	na	--
1,2,4-Trichlorobenzene	0	--	--	na	9.4E+02	--	--	na	1.2E+06	--	--	na	9.4E+01	--	--	na	1.2E+05	--	--	na	1.2E+05
1,1,2-Trichloroethane ^C	0	--	--	na	4.2E+02	--	--	na	2.1E+06	--	--	na	4.2E+01	--	--	na	2.1E+05	--	--	na	2.1E+05
Trichloroethylene ^C	0	--	--	na	8.1E+02	--	--	na	4.0E+06	--	--	na	8.1E+01	--	--	na	4.0E+05	--	--	na	4.0E+05
2,4,6-Trichlorophenol ^C	0	--	--	na	6.5E+01	--	--	na	3.2E+05	--	--	na	6.5E+00	--	--	na	3.2E+04	--	--	na	3.2E+04
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--	--	--	na	--
Vinyl Chloride ^C	0	--	--	na	6.1E+01	--	--	na	3.0E+05	--	--	na	6.1E+00	--	--	na	3.0E+04	--	--	na	3.0E+04
Zinc	0	3.6E+01	3.6E+01	na	6.9E+04	6.2E+02	1.8E+04	na	9.0E+07	9.1E+00	9.1E+00	na	6.9E+03	3.0E+03	4.4E+03	na	9.0E+06	6.2E+02	4.4E+03	na	9.0E+06

Notes:

- All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
- Metals measured as Dissolved, unless specified otherwise
- "C" indicates a carcinogenic parameter
- Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
Antidegradation WLAs are based upon a complete mix.
- Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
= (0.1(WQC - background conc.) + background conc.) for human health
- WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, Harmonic Mean for Carcinogens, and Annual Average for Dioxin. Mixing ratios may be substituted for stream flows where appropriate.

Metal	Target Value (SSTV)
Antimony	5.6E+05
Arsenic	2.3E+03
Barium	na
Cadmium	5.7E+00
Chromium III	1.3E+03
Chromium VI	1.1E+02
Copper	2.5E+01
Iron	na
Lead	1.4E+02
Manganese	na
Mercury	6.6E+00
Nickel	3.9E+02
Selenium	1.4E+02
Silver	2.2E+00
Zinc	2.5E+02

Note: do not use QL's lower than the minimum QL's provided in agency guidance

Mixing Zone Predictions for

Rapidan Mill WWTP - Wet

Effluent Flow = 0.02 MGD
Stream 7Q10 = 54 MGD
Stream 30Q10 = 72 MGD
Stream 1Q10 = 40 MGD
Stream slope = 0.001 ft/ft
Stream width = 75 ft
Bottom scale = 1
Channel scale = 1

Mixing Zone Predictions @ 7Q10

Depth = 1.1191 ft
Length = 10550.28 ft
Velocity = .9962 ft/sec
Residence Time = .1226 days

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 7Q10 may be used.

Mixing Zone Predictions @ 30Q10

Depth = 1.333 ft
Length = 9085.29 ft
Velocity = 1.1151 ft/sec
Residence Time = .0943 days

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 30Q10 may be used.

Mixing Zone Predictions @ 1Q10

Depth = .933 ft
Length = 12315.88 ft
Velocity = .8852 ft/sec
Residence Time = 3.8646 hours

Recommendation:

A complete mix assumption is appropriate for this situation providing no more than 25.88% of the 1Q10 is used.

Mixing Zone Predictions for

Rapidan Mill WWTP - Annual

Effluent Flow = 0.02 MGD
Stream 7Q10 = 9.7 MGD
Stream 30Q10 = 16 MGD
Stream 1Q10 = 6.5 MGD
Stream slope = 0.001 ft/ft
Stream width = 75 ft
Bottom scale = 1
Channel scale = 1

Mixing Zone Predictions @ 7Q10

Depth = .3969 ft
Length = 25340.81 ft
Velocity = .5054 ft/sec
Residence Time = .5803 days

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 7Q10 may be used.

Mixing Zone Predictions @ 30Q10

Depth = .5365 ft
Length = 19667.46 ft
Velocity = .6163 ft/sec
Residence Time = .3693 days

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 30Q10 may be used.

Mixing Zone Predictions @ 1Q10

Depth = .3119 ft
Length = 31033.2 ft
Velocity = .4312 ft/sec
Residence Time = 19.9917 hours

Recommendation:

A complete mix assumption is appropriate for this situation providing no more than 5.% of the 1Q10 is used.

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated wastewater into a water body in Orange County, Virginia.

PUBLIC COMMENT PERIOD: June 12, 2009 to 5:00 p.m. on July 13, 2009

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Wastewater issued by DEQ, under the authority of the State Water Control Board.

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Rapidan Mill LLC, 704 Locust Street, Charlottesville, VA 22902, VA0092339

NAME AND ADDRESS OF FACILITY: Clean Rapidan Water Company - Rapidan Mill Waste Water Treatment Plant, 7026 Rapidan Road, Orange, VA 22960

PROJECT DESCRIPTION: Rapidan Mill LLC has applied for a new permit for the private Clean Rapidan Water Company - Rapidan Mill Waste Water Treatment Plant. The applicant proposes to release treated sewage wastewaters at a rate of 0.02 million gallons per day into a water body. Sludge from the treatment process will be transported to the Town of Orange WWTP for disposal. The facility proposes to release the treated sewage wastewater in the Rapidan River in Orange County in the Rappahannock River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, CBOD₅, TSS, DO, TKN, and *E. coli*.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the documents at the DEQ-Northern Regional Office by appointment.

Name: Susan Mackert

Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193

Phone: (703) 583-3853 E-mail: susan.mackert@deq.virginia.gov Fax: (703) 583-3821

**State "Transmittal Checklist" to Assist in Targeting
Municipal and Industrial Individual NPDES Draft Permits for Review**

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name:	Clean Rapidan Water Company – Rapidan Mill WWTP
NPDES Permit Number:	VA0092339
Permit Writer Name:	Susan Mackert
Date:	March 26, 2009

Major []

Minor [X]

Industrial []

Municipal [X]

I.A. Draft Permit Package Submittal Includes:

	Yes	No	N/A
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?	X		
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?			X
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?			X
8. Whole Effluent Toxicity Test summary and analysis?			X
9. Permit Rating Sheet for new or modified industrial facilities?			X

I.B. Permit/Facility Characteristics

	Yes	No	N/A
1. Is this a new, or currently unpermitted facility?	X		
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet or permit contain a description of the wastewater treatment process?	X		
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?			X
5. Has there been any change in streamflow characteristics since the last permit was developed?			X
6. Does the permit allow the discharge of new or increased loadings of any pollutants?			X
7. Does the fact sheet or permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?	X		
a. Has a TMDL been developed and approved by EPA for the impaired water?		X	
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?		X	
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?	X		
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?			X
10. Does the permit authorize discharges of storm water?		X	

	Yes	No	N/A
I.B. Permit/Facility Characteristics – cont.			
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?			X
12. Are there any production-based, technology-based effluent limits in the permit?		X	
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?			X

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Checklist – for POTWs

II.A. Permit Cover Page/Administration

	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements

	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether “antibacksliding” provisions were met for any limits that are less stringent than those in the previous NPDES permit?			X

II.C. Technology-Based Effluent Limits (POTWs)

	Yes	No	N/A
1. Does the permit contain numeric limits for <u>ALL</u> of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH?	X		
2. Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133?	X		
a. If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved?			X
3. Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)?	X		
4. Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits?	X		
5. Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)?		X	
a. If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?			X

II.D. Water Quality-Based Effluent Limits

	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL?			X
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a “reasonable potential” evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the “reasonable potential” evaluation was performed in accordance with the State’s approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			X
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have “reasonable potential”?	X		
d. Does the fact sheet indicate that the “reasonable potential” and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?			X
e. Does the permit contain numeric effluent limits for all pollutants for which “reasonable potential” was determined?	X		

II.D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established?	X		
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the record indicate that an “antidegradation” review was performed in accordance with the State’s approved antidegradation policy?	X		

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?		X	
4. Does the permit require testing for Whole Effluent Toxicity?		X	

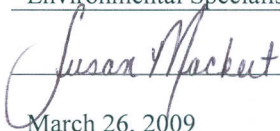
II.F. Special Conditions	Yes	No	N/A
1. Does the permit include appropriate biosolids use/disposal requirements?	X		
2. Does the permit include appropriate storm water program requirements?			X

II.F. Special Conditions – cont.	Yes	No	N/A
3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		
5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]?		X	
6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)?		X	
a. Does the permit require implementation of the “Nine Minimum Controls”?		X	
b. Does the permit require development and implementation of a “Long Term Control Plan”?		X	
c. Does the permit require monitoring and reporting for CSO events?		X	
7. Does the permit include appropriate Pretreatment Program requirements?			X

II.G. Standard Conditions		Yes	No	N/A
1. Does the permit contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?		X		
List of Standard Conditions – 40 CFR 122.41				
Duty to comply	Property rights	Reporting Requirements		
Duty to reapply	Duty to provide information	Planned change		
Need to halt or reduce activity not a defense	Inspections and entry	Anticipated noncompliance		
Duty to mitigate	Monitoring and records	Transfers		
Proper O & M	Signatory requirement	Monitoring reports		
Permit actions	Bypass	Compliance schedules		
	Upset	24-Hour reporting		
		Other non-compliance		
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]?		X		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	<u>Susan Mackert</u>
Title	<u>Environmental Specialist II</u>
Signature	<u></u>
Date	<u>March 26, 2009</u>